TRIO PETROLEUM INC.
5401 Business Park South, Suite 115 Bakersfield, California 93309
(805) 324-3911

October 26, 1988

OVERNIGHT MAIL

Mr. Mark Samolis
Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Dear Mr. Samolis:

I wrote you a letter dated July 22, 1988 in which I was requesting an exemption for my water injection well at Union Avenue.

At the time, I was under the assumption that the Division of Oil and Gas knew where the top of the Chanac zone began; and since they had told me that I was not injecting into the Chanac, I wrote the above-mentioned letter requesting the exemption. I now find after doing a considerable amount of work at Union Avenue that the Division was apparently basing their evidence of the Chanac top on a study that was made in their Summary of Operations Report dated January-June 1961. I started out by reviewing this information and to my amazement found that even in that study they were unsure of the top of the Chanac zone.

Mr. Stan Eschner, my partner in Trio Petroleum Inc., who was formerly in charge of domestic exploration in the United States for Occidental Petroleum Corporation, made a study for me to determine the top of the Chanac reservoir. Based on a careful examination of all of the data in the surrounding fields, together with an analysis of the lithology from the drilling samples in the Union Avenue disposal well and other sample analyses from drilling done in the field over the past 10 years, it is now clear that I am injecting into the Chanac reservoir.

I transmitted this information to Mr. Dave Mitchell and believe that if you would talk to him and tell him that as long as I am injecting into the Chanac I can continue my injection, I would greatly appreciate it.

Very truly yours,

C. C. Horace
President

CCH:M

STATE OF CALIFORNIA-RESOURCES AGENCY

GEORGE DEUKMEJIAN, *Governor*

DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS
4800 STOCKDALE HWY., SUITE # 417
BAKERSFIELD, CALIFORNIA 93309
(805) 322-4031

October 19, 1988

Mr. C. Horace
L.W. Babcock
5401 Business Park South, Suite 115
Bakersfield, CA 93309

Dear Mr. Horace:

This office has reviewed the data submitted to us October 18, 1988 as proof of your contention that the interval from 1954' - 2242' in your well "Water Injection Well" 1, section 6, T.30S., R.28E., Union Avenue oil field is within the Chanac formation of Pliocene age and find that the evidence submitted does not substantiate your claim. We feel that lithologic color can and does change dramatically even within relatively short distances and cannot be used as a sole indicator of formational change. Our decision of July 18, 1988, stating that the zone of injection in the referenced well is the Kern River formation stands as does our order of October 6, 1988 to cease and desist injection into well "Water Injection Well" 1.

Further, this Division finds you in violation of section 1724.6 of the California Code of Regulations insofar as, during a personal conversation between yourself and Mr. David Mitchell of this office on October 17, 1988, you stated that you had converted another well on your property (reported as "Roberts" 1) to subsurface injection during the weekend of October 15-16, 1988 without Division of Oil and Gas knowledge or approval. A field inspection made by Mr. Dwight Isenhower on October 19, 1988 confirmed this violation. This violation is punishable by a maximum of $5,000.00 and/or six months imprisonment for each offense.

Please contact this office if you have any questions.

Yours truly,

E. A. Welge
Deputy Supervisor

By: David Mitchell
David Mitchell
Senior Oil and Gas Engineer

cc: EPA
RWQCB
Kern County Water Agency
Kern County Board of Planning and Development Services

CERTIFIED MAIL # 42792
Return Receipt Requested

CHARLES C. HORACE
5401 BUSINESS PARK SOUTH, SUITE 115
BAKERSFIELD, CALIFORNIA 93309
(805) 324-3911

July 22, 1988

Mr. Mark Samolis
Environmental Protection Agency
Region IX
215 Fremont Street
San Francisco, California 94105

Dear Mr. Samolis:

Mr. Dave Mitchell, senior gas engineer for the California Division of Oil and Gas, has asked that I prepare a request to exempt the reservoir that I have been injecting into for the past year.

In the way of review, I took over the operation of the Union Avenue oil field from Mr. Babcock after his death. The original operator (Signal Oil and Gas) had attempted to inject the waste water into the Chanac reservoir but because of the lenticular nature of this zone in the Union Avenue field, were unable to sustain the injection and went back to injecting into sands at the surface. Mr. Babcock bought the wells from Signal and continued the shallow injection until the early 1980's at which time, at the insistance of the DOG and California Water Control Board, the water was pumped into the Santa Margarita producing zone. Because of the close spacing of the producing section in the 4 wells, the water rapidly recycled and, in addition, major plugging occurred so that injection finally had to be shut down. Several letters went back and forth between the DOG and myself in an attempt to find a solution and finally, after a careful study, I agreed to directionally drill an injection well to a depth of approximately 2275 feet to dispose of the water. The only major concern at the time was whether the salinity of the reservoir to be injected into was more saline than our produced water. Attached are copies of the water analysis of the produced water and water in the disposal acquifer. You will note that the total dissolved solids of the water in the sands being injected into are better than twice the produced water salinity.

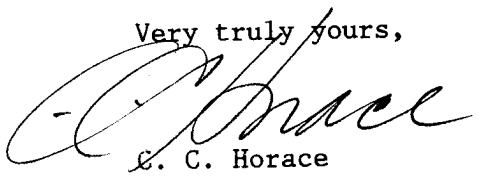
The production from the field is about 50 b/d of oil and 2000 b/d of water. The DOG says an exemption is necessary since their correlations show the injection interval is in the Kern River sands. The deepest well producing fresh water in the area is 1020 feet, whereas most of the wells produce from 300 to 700 feet.

According to your attachment B, "Criteria to Exempt Acquifers," our injection reservoir would fall into category III, where the TDS level is above 3000 mg/l and not <u>reasonably</u> expected to supply a public water system. Its depth is approximately 2 times the deepest drinking water well.

The field is located in Kern County, Section 6, T30S R28E M.D.B.& M. and about 315 feet from the nearest City of Bakersfield boundary. The surface land is owned by Gan and Song Pon, 306 17th Street, Bakersfield, CA 93301. The geology of the area is very complicated and highly faulted.

We would very much appreciate your early consideration of this matter.

Very truly yours,



C. C. Horace

CCH:dmck

Enclosures

AGRICULTURE
CHEMICAL ANALYSIS
PETROLEUM

BC LABORATORIES, INC.

4100 PIERCE ROAD, 93308 BAKERSFIELD, CALIFORNIA 93308 PHONE 327-4911

Submitted By: Horace, C. C.
4249 Country Club Drive
Bakersfield, California 93306

Date Reported: 4/3/87
Date Received: 3/26/87
Laboratory No.: 5421

Marked: Union Avenue Produced Water, Santa Margarita Zone

WATER ANALYSIS

Constituents, Parts/million

Boron (B)	3.4
Calcium (Ca)	36.
Magnesium (Mg)	5.9
Sodium (Na)	720.
Potassium (K)	4.4
Carbonate (CO_3)	10.2
Bicarbonate (HCO_3)	261.
Chloride (Cl)	995.
Sulfate (SO_4)	20.
Nitrate (NO_3)	
Fluoride (F)	
Iron (Fe)	0.15
Manganese (Mn)	
Copper (Cu)	
Zinc (Zn)	
Aluminum (Al)	
Silica (SiO_2)	
Phosphate (PO_4)	
Total Hardness as $CaCO_3$	114. (6.6 gr/gal)
Total Dissolved Solids @	2056. (by summation)
Oil (Freon extraction)	39.6 mg/kg
Total Dissolved Solids	1845. (gravimetric)
pH	8.3
E.C., Micromhos/cm, ($Kx10^6$) @ 25°C	3900.
Resistivity, Ohm M^2/M	2.56
Specific Gravity	1.000
Sulfide as H_2S	(-) 0.1
Hydroxide	0.

B C LABORATORIES, INC.

BY J. J. Eglin
J. J. Eglin

:TURE
.ICAL ANALYSIS
PETROLEUM

BC LABORATORIES, INC.

4100 PIERCE ROAD, 93308 BAKERSFIELD, CALIFORNIA 93308 PHONE 327-4911

Submitted By: Horace & Babcock
5216 Montecito Drive
Bakersfield, CA 93306

Date Reported: 07/28/87
Date Received: 07/21/87
Laboratory No.: 14395

Marked: Interval 1954-2285 Union Ave. Disposal Well #1

OILFIELD
WATER ANALYSIS

Constituents, mg/liter

Boron (B)	0.14
Calcium (Ca)	207.
Magnesium (Mg)	2.4
Sodium (Na)	1,300.
Potassium (K)	6.8
Carbonate (CO_3)	6.0
Bicarbonate (HCO_3)	48.5
Chloride (Cl)	2,340.
Sulfate (SO_4)	17.
Nitrate (NO_3)	0.4
Fluoride (F)	
Iron (Fe)	1.1
Manganese (Mn)	0.03
Copper (Cu)	(-) 0.01
Zinc (Zn)	
Aluminum (Al)	
Silica (SiO_2)	18.
Phosphate (PO_4)	
Total Hardness as $CaCO_3$	528. (30.8 gr/gal)
Total Dissolved Solids @	3,947.
Oil (Freon extraction)	
pH	8.6
E.C., Micromhos/cm, ($Kx10^6$) @ 25°C	7,300.
Resistivity, Ohm M^2/M	1.37

(-) refers to "less than"

B C LABORATORIES, INC.

BY J. J. Eglin
J. J. Eglin